stored condition information to the host computer in accordance with a request for acquiring the condition information issued by the host computer; and

code for a management function of managing an image output job of the host computer,

wherein the condition information is obtained by forming color patches and measuring colors on the color patches.

REMARKS

This application has been reviewed in light of the Office Action dated April 13, 2000. Claims 1-15 remain pending in this application, with Claims 1, 7, and 11-15 having been amended to define still more clearly what Applicant regards as his invention. Claims 1, 7, and 11-15 are in independent form. Favorable reconsideration is requested.

The Office Action rejected Claims 7 and 13 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,220,674 (Morgan et al.).

The Office Action rejected Claims 8, 9, and 15 under 35 U.S.C. § 103(a) as being unpatentable over Morgan et al. in view of U.S. Patent No. 5,768,483 (Maniwa et al.).

The Office Action rejected Claims 10 and 11 under 35 U.S.C. § 103(a) as being unpatentable over Morgan et al. in view

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of U.S. Patent No. 5,579,090 (Sasanuma et al.).

The Office Action rejected Claims 1-6, 12, and 14 under 35 U.S.C. § 103(a) as being unpatentable over Maniwa et al. in view of Sasanuma et al., and further in view of U.S. Patent No. 4,381,553 (Ferguson).

Morgan et al., as understood by Applicants, relates to a local-area printer server that obtains status information from a printer and manages resources for the printer. Apparently, Morgan et al. teaches that the server controls the servicing of requests by the printer for resources needed to satisfy a printing job. The server provides the requested resources or obtains the requested resources from a remote source.

Maniwa et al., as understood by Applicants, relates to a system for managing a print job in a network system.

Sasanuma et al. relates to an image output apparatus that performs self-calibration, so that gradation characteristics are maintained to be consistent over time.

Ferguson, as understood by Applicants, relates to a printer controller for monitoring a status of a printer.

Applicant submits that independent Claims 1, 7, and 11-15, and the claims dependent thereon, are patentably distinct from the cited prior art for at least the following reasons.

The aspect of the present invention set forth in Claim 1 is directed to an image processing apparatus that includes a communicator for performing two-way communication with an image output unit, so that updated condition information may be efficiently managed and acquired via a network. The image output unit includes an update unit for updating condition information indicating a condition of the image output unit, and a memory for storing the condition information. The condition information is obtained by forming color patches and measuring colors on the color patches. (See, for example, the specification at page 10, lines 15-18; page 18, line 6 to page 19, line 9; and original Claim 3.)

The apparatus also includes an input unit for inputting an instruction to output an image, an acquisition unit for acquiring the condition information stored in the image output unit in response to the instruction, and an image processor for performing image processing of image data based on the acquired condition information.

One important feature of Claim 1 is that condition information, such as a calibration result obtained from a calibration performed by the image output unit (e.g., printer, copier), is efficiently acquired by the image processing apparatus (e.g., host computer), based on an instruction to

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output an image. The acquired condition information is used by the image processing apparatus to perform image processing of image data. Thus, the image processing apparatus uses the most recent condition information available from the image output unit to process the image data, because the condition information is acquired in response to the instruction to output an image.

Applicants submit that a combination of Maniwa et al., Sasanuma et al., and Ferguson, assuming such combination would even be permissible, would fail to teach or suggest an image processing apparatus that includes "an acquisition unit for acquiring the condition information stored in the image output unit by utilizing the two-way communications, in response to the image output instruction," and "an image processor for performing image processing of image data in accordance with the condition information acquired by said acquisition unit," as recited in Claim 1.

Applicant submits that, at best, the cited combination would result in a the inclusion of a calibration table in status information obtained by a printer server from a printer. However, none of cited references teach or suggest <u>when</u> the printer server is to obtain the status information with the included calibration table.

The present invention recognizes that characteristics

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of an image output unit change with time, and solves this problem

by using the most recent condition information available for the

image output unit to process image data, to ensure that the

highest quality image is produced. According to Claim 1, the

condition information is acquired after an instruction is

inputted to the image processing apparatus instructing that an

image is to be outputted.

Applicants submit that, although it is known to

calibrate an image processing condition based on changes in

output characteristics of an image, and although it is also known

that image processing for an image output unit is generally

performed by a host computer, the cited references fail to

suggest a way to correct for changes in conditions of an image

output unit when processing of data for which an image is to be

output occurs in a host computer. Therefore, absent the

teachings of the present invention, an aspect of which is set

forth in Claim 1, Applicant submits that one of ordinary skill

would have no suggestion to acquire condition information stored

in an image output unit in response to an instruction to output

an image, as claimed in Claim 1.

Accordingly, Applicant submits that Claim 1 is

patentable over the cited art, and respectfully requests

withdrawal of the rejection under 35 U.S.C. § 103(a).

Independent Claims 12 and 14 are method and computer memory medium claims corresponding to apparatus Claim 1, and are believed to be patentable for at least the same reasons as discussed above in connection with Claim 1.

The aspect of the present invention set forth in Claim 7 is directed to an image processing apparatus connected with a host computer and a plurality of image output units via a communication network. Each image output unit has a function of updating its own condition information.

The apparatus includes an input unit for inputting the condition information updated by the plurality of image output units, and a memory for storing the inputted condition information in association with each of the plurality of image output units. The condition information is obtained by forming color patches and measuring colors on the color patches.

The apparatus also includes a transmitter for transmitting the stored condition information to the host computer in accordance with a request issued by the host computer. A management unit of the apparatus manages an image output job of the host computer.

One important feature of Claim 7 is that the apparatus performs data correction using condition information, obtained by forming color patches and measuring colors on the

color patches, updated by each of the plurality of image output units and inputted to the apparatus. (See, for example, the specification at page 10, lines 15-18; page 18, line 6 to page 19, line 9; and original Claim 3.) The condition information is stored in the memory of the apparatus, and the stored information is transmitted to the host computer upon request from the host computer.

Nothing has been found in Morgan et al. that teaches or suggests an image processing apparatus that includes "a transmitter for transmitting the stored condition information to the host computer in accordance with a request for acquiring the condition information issued by the host computer," as recited in Claim 7. Accordingly, Applicant submits that Claim 7 is not anticipated by Morgan et al., and respectfully requests withdrawal of the rejection under 35 U.S.C. § 102(b).

Independent Claims 13 and 15 are method and computer memory medium claims corresponding to apparatus Claim 7, and are believed to be patentable for at least the same reasons as discussed above in connection with Claim 7. Additionally, independent Claim 11 includes the same feature, in which updated condition information is acquired in response to an instruction, as discussed above in connection with Claims 1 and 7. Accordingly, Claim 11 is believed to be patentable for at least

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the same reasons as discussed above in connection with Claims 1 and 7.

A review of the other art of record has failed to reveal anything that, in Applicant's opinion, would remedy the deficiencies of the art discussed above, as applied against the independent claims herein. Therefore, those claims are respectfully submitted to be patentable over the art of record.

The other rejected claims in this application depend from one or another of the independent claims discussed above, and, therefore, are submitted to be patentable for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, individual reconsideration of the patentability of each claim on its own merits is respectfully requested.

This Amendment After Final Action is believed clearly to place this application in condition for allowance and, therefore, its entry is believed proper under 37 C.F.R. § 1.116. Accordingly, entry of this Amendment After Final Action, as an earnest effort to advance prosecution and reduce the number of issues, is respectfully requested. Should the Examiner believe that issues remain outstanding, it is respectfully requested that the Examiner contact Applicant's undersigned attorney in an effort to resolve such issues and advance the case to issue.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE TO CLAIMS

1. (Twice Amended) An image processing apparatus comprising:

a communicator for performing two-way communications with an image output unit that includes an update unit for updating condition information indicating a condition of the image output unit and a memory for storing the condition information, wherein the condition information is obtained by forming color patches and measuring colors on the color patches;

an input unit for inputting an image output instruction;

an acquisition unit for acquiring the condition information stored in the image output unit by utilizing the two-way communications, in response to the image output instruction; and

an image processor for performing image processing of image data in accordance with the condition information acquired by said acquisition unit.

7. (Twice Amended) An image processing apparatus connected, via a communication network, with a host computer and a plurality of image output units, each image output unit having

a function of updating condition information of the image output

unit, said apparatus comprising:

an input unit for inputting the condition information

updated by the plurality of image output units;

a memory for storing the inputted condition information

in association with each of the plurality of image output units;

a transmitter for transmitting the stored condition

information to the host computer in accordance with a request for

acquiring the condition information issued by the host computer;

and

a management unit for managing an image output job of

the host computer,

wherein the condition information is obtained by

forming color patches and measuring colors on the color patches.

11. (Twice Amended) An image processing method for

performing image processing in a network system to which an image

output apparatus, a server, and a network terminal are connected,

said method comprising:

in the image output apparatus:

a condition measurement function of [measuring a]

updating condition [in accordance with a change in status]

information by forming color patches and measuring colors on the

color patches; and

a notification function of notifying the server of

[a condition measurement result] the updated condition

information,

in the server:

a storage function of storing the updated

condition [measurement result] information notified from the

image output apparatus in correspondence with a type of the image

output apparatus; and

a management function of managing an image output

job, and

in the network terminal:

an input function of inputting an image output

instruction of a user;

an acquisition function of acquiring the updated

condition [measurement result] information stored in the server

in response to the image output instruction; and

an image processing function of performing image

processing using an image processing condition in accordance with

the updated condition [measurement result] information.

12. (Twice Amended)   An image processing method for

making an image output unit output an image, wherein the image

output unit includes an update unit for updating condition

information indicating a condition of the image output unit and a

memory for storing the condition information, said method

comprising the steps of:

inputting an image output instruction;

acquiring the condition information stored in the image
output unit by utilizing two-way communications, in response to
the image output instruction; and

performing image processing of image data in accordance
with the condition information acquired in said acquiring step,
wherein the condition information is obtained by
forming color patches and measuring colors on the color patches.

13. (Twice Amended) An image processing method
performed in a server connected, via a communication network,
with a host computer and a plurality of image output units, each
image output unit having a function of updating condition
information of the image output unit, said method comprising the
steps of:

inputting the condition information updated by the
plurality of image output units;

storing the inputted condition information in
association with each of the plurality of image output units;

transmitting the stored condition information to the
host computer in accordance with a request for acquiring the
condition information issued by the host computer; and

managing an image output job of the host computer,
wherein the condition information is obtained by
forming color patches and measuring colors on the color patches.

14. (Twice Amended) A computer-readable storage medium that stores a program for implementing, by a computer, an image processing method, the program comprising:

code for a communication function of performing two-way communications with an image output unit having means for updating condition information indicating a condition of the image output unit and means for storing the condition information, wherein the condition information is obtained by forming color patches and measuring colors on the color patches;

code for an input function of inputting an image output instruction;

code for an acquisition function of acquiring the condition information stored in the image output unit by utilizing the two-way communications, in response to the image output instruction; and

code for an image processing function of performing image processing of image data in accordance with the condition information acquired by the acquisition function.

15. (Twice Amended) A computer-readable storage medium that stores a program for an image processing method performed by a server connected, via a communication network, with a host computer and a plurality of image output units, each image output unit having a function of updating condition information of the image output unit, the program comprising:

code for an input function of inputting the condition information updated by the plurality of image output units;

code for a storage function of storing the inputted condition information in association with each of the plurality of image output units;

code for a transmission function of transmitting the stored condition information to the host computer in accordance with a request for acquiring the condition information issued by the host computer; and

code for a management function of managing an image output job of the host computer,

wherein the condition information is obtained by forming color patches and measuring colors on the color patches.